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COMPANY

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN FRANCISCO DIVISION

UNITED STATES OF AMERICA,  
  
Plaintiff,  
  
v.  
  
PACIFIC GAS AND ELECTRIC COMPANY,  
  
Defendant.

Case No. 14-CR-00175-WHA

**[REDACTED] DECLARATION  
REGARDING VEGETATION  
MANAGEMENT IN SUPPORT OF  
PG&E'S RESPONSE TO ORDER  
TO SHOW CAUSE  
AND FURTHER ORDER TO  
SHOW CAUSE**

Judge: Hon. William Alsup

1 [REDACTED] declare as follows:

2 1. I am the Director of Vegetation Management Execution at Pacific Gas and  
3 Electric Company ("PG&E"). In this role, I am responsible for overseeing the execution of all of  
4 PG&E's vegetation management programs. I have held this position since July 2019. This  
5 declaration is based on my personal knowledge and information known to me in my role as  
6 Director of Vegetation Management Execution.

7 Compliance with Vegetation Management Laws

8 2. Resource constraints with respect to the number of available qualified pre-  
9 inspectors and line clearance tree trimmers are not currently impacting PG&E's compliance with  
10 vegetation management laws.

11 3. As reported to the Court in PG&E's January 15, 2020 Response to  
12 Request for Information Regarding Probation Conditions ("January 15 submission"), PG&E's  
13 vegetation management records reflect that approximately 22,000 trees identified in 2019 as  
14 hazard trees or trees with vegetation within the four-foot radial clearance area set forth in PRC  
15 Section 4293 have not yet been worked by PG&E.

16 4. This 22,000 tree figure includes work that was delayed because of  
17 environmental issues, permitting requirements and customer refusals, as well as work identified  
18 in late 2019 that had not yet been addressed in the ordinary course of business. In addition,  
19 because there is a lag between the time tree work is completed and the time PG&E contractors  
20 submit the paperwork that is used to confirm completion in PG&E's vegetation management  
21 records, PG&E expects that once that paperwork is submitted, its records will reflect that many  
22 of the trees were worked within PG&E's standard work completion timeframes.

23 5. For the subset of trees that do not fall into any of these categories, delays  
24 were the result of planning and prioritization issues as PG&E completed an unprecedented  
25 volume of tree work in the final months of 2019. PG&E acknowledges that such issues are  
26 unacceptable and is continuing to take steps to mature its expanded vegetation management  
27 operations and improve oversight and management of its current contractor workforce. In 2020,  
28

PG&E has improved its regional Vegetation Management (“VM”) managers’ ability to track outstanding compliance work and is developing additional checkpoints with contractors as it prioritizes timely completion of this work.

6. PG&E cannot certify perfect compliance with all governing vegetation management regulations because it operates its electric facilities in a dynamic natural environments across approximately 70,000 square miles over a variety of climates and terrains and estimates that it has more than 100 million trees with the potential to grow or fall into overhead lines. Both natural and human events change the conditions of those trees all the time. For example, a tree that was compliant at the time of a prior inspection might become a non-compliant hazard tree one day later when it is damaged by a natural event like a lightning strike or extreme weather event, or three months later after a bark beetle infestation has taken hold. PG&E is not able to surveil all trees at all times or address all vegetation non-compliances the moment they occur. What PG&E can do, and is doing, is to continue to make process and workforce improvements to enhance the efficiency and quality of its vegetation management work.

#### Compliance with Wildfire Safety Plan Targets

7. Resource constraints with respect to the number of available qualified pre-inspectors and line clearance tree trimmers also are not currently impacting PG&E’s ability to meet its Wildfire Safety Plan targets. In fact, PG&E is in substantial compliance with the targets included in its 2019 Wildfire Safety Plan.

8. PG&E’s 2019 Wildfire Safety Plan included year-end targets for the completion of Enhanced Vegetation Management (“EVM”) and Catastrophic Event Management Account (“CEMA”, which is PG&E’s drought emergency response vegetation management work) line miles.

9. PG&E completed work on 2,498 EVM line miles in 2019, exceeding its year-end 2019 target of 2,450 miles.

10. While PG&E targeted 100% completion of planned CEMA work by year-end 2019, it missed that target, achieving just over 80% completion due to changes in the schedule for routine inspections that impacted the timing of subsequent CEMA inspections. The CEMA patrol schedule is based on the routine patrol schedule with a CEMA patrol targeted for approximately six months after the routine patrol as appropriate. This is because PG&E's routine patrol acts as a "first patrol" for dead, dying, or diseased trees along all of PG&E's distribution lines, and CEMA acts as a "second patrol" for dead, dying or diseased trees along PG&E's lines in high fire-threat areas.

11. In early 2019, PG&E changed its routine inspection schedule to prioritize routine patrols in the highest fire-threat areas. At the same time, PG&E experienced delays in routine work as it ramped up its pre-inspector workforce to cover an unprecedented amount of vegetation management work in 2019. PG&E also experienced delays in certain routine inspections due to weather in high snow-pack areas. While PG&E completed virtually all of its routine inspections by year-end 2019, a number of CEMA patrol dates were shifted into 2020 to allow for an appropriate interval between routine and CEMA inspections. PG&E is reviewing the impact of its routine patrol schedule on its 2020 CEMA schedule and will consider adding a mid-cycle inspection if there is a greater than six month gap between routine and CEMA patrols in 2020.

The Impact of the Shortage of Qualified Tree Workers in California on the Pace of PG&E's EVM Work

12. While the number of available tree workers is not currently impacting PG&E's ability to comply with vegetation management laws or meet its Wildfire Safety Plan targets, it does impact the pace at which PG&E estimates it can complete its EVM work.

13. The Bureau of Labor Statistics' most recent data on the entire "Tree Trimmers and Pruners" occupation (from May 2018) shows nationwide employment of 42,440

1 and California-wide employment of 6,840.<sup>1</sup> However, only a small subset of those tree workers  
 2 are qualified as “line clearance” tree trimmers who are certified to perform tree trimming within  
 3 10 feet of high voltage lines.

4 14. Line-clearance tree work—which generally involves tree pruning, tree  
 5 removal and brush removal—is a highly dangerous line of work that requires extensive training  
 6 and on-the-job experience to perform properly and safely. Because of the unique risks  
 7 associated with removing and pruning vegetation within 10 feet of energized lines, tree workers  
 8 are authorized to perform line clearance work only after receiving additional training and  
 9 certification beyond that which all tree workers receive.

10 15. In California, the pruning, trimming, repairing, maintaining, chemical  
 11 treatment, removal or clearing of trees, or the cutting of brush and miscellaneous vegetation, that  
 12 is within certain distances of electric supply lines or equipment (generally 10 feet for  
 13 distribution-level voltages) may be performed only by a “Qualified Line Clearance Tree  
 14 Trimmer”, defined by law as “a person who has completed a minimum of 18 months-related  
 15 training and on-the-job experience and is familiar with the special techniques and hazards  
 16 involved in line clearance tree trimming operations”.<sup>2</sup>

17 16. California and federal law prescribe comprehensive training and safety  
 18 requirements for line-clearance tree trimmers that cover, among other things, safety-related work  
 19 practices, safety procedures and emergency procedures; the skills and techniques necessary to  
 20 distinguish exposed live parts from other parts of electric equipment; minimum approach  
 21

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22 <sup>1</sup> U.S. Bureau of Labor Statistics, Occupational Employment and Wages, May 2018, 37-  
 23 3013 Tree Trimmers and Pruners, available at  
<https://www.bls.gov/oes/2018/may/oes373013.htm>.

24 <sup>2</sup> 8 CCR § 2700 (definitions of “Line Clearance Tree Trimming Operations” and “Qualified  
 25 Line Clearance Tree Trimmer”); *see also* 29 C.F.R. § 1910.269(x) (defining “Line-clearance tree  
 26 trimming” and “Line-clearance tree trimmer” in substantively similar terms); 8 CCR §  
 27 3423(b)(1), (c) (prohibiting line clearance tree trimming work by persons other than Qualified  
 28 Line Clearance Tree Trimmers).



distances for voltages to which the employee will be exposed and the skills and techniques necessary to maintain those distances; and the proper use of precautionary techniques, equipment and tools for working on or near exposed energized parts of electric equipment.<sup>3</sup> Particular kinds of removal and trimming operations that involve climbing trees or the use of cranes may require additional levels of training and experience.<sup>4</sup>

17. Because tree work is both dangerous and highly specialized, PG&E requires its contractors to meet these stringent training and safety requirements as a condition of their engagement. As part of its contractual arrangements, PG&E also requires that tree crews be overseen by field supervisors and foremen with a minimum of five years' experience and 18 months' experience, respectively, in line clearance tree work (or equivalent); that field supervisors keep current with new arboricultural practices and ensure their teams receive up-to-date training in new techniques and practices; and that climbers and apprentice climbers have 18 months' experience and three months' experience, respectively, in line clearance tree work and be trained in state and federal regulations on safety and the use of tools and equipment associated with approved tree pruning requirements and practices.<sup>5</sup>

18. As PG&E explained in its 2019 Amended Wildfire Safety Plan, PG&E developed its annual targets for EVM based on its estimate that it would maintain a workforce of approximately 3,000 qualified line clearance tree workers, resulting in an approximately eight-year timeline to complete the full scope of its EVM work. PG&E estimated the number of available tree workers based on its own experience, as well as research conducted by an external consultant.

<sup>3</sup> See 8 CCR §§ 2940.2, 2950-2951, 3420-3428; 29 C.F.R. §§ 1910.269(a)(2), (r).

<sup>4</sup> See, e.g., 8 CCR 3427(a)(1)(B).

<sup>5</sup> PG&E Vegetation Management Specification No. 5405: Specification for Tree Pruning and Tree and Brush Removal in PG&E's Service Territory, dated December 6, 2018, at Part 1 §§ 5.1.1, 5.1.2.

1           19.     *First*, PG&E's own experience casting a wide net and offering substantial  
2 financial incentives to hire additional tree personnel in the fall of 2018 identified a maximum of  
3 approximately 3,000 qualified tree workers to perform vegetation management activities around  
4 utility lines at that time.

5           20.     *Second*, in 2016, PG&E contracted with a vegetation management  
6 consultant to perform a market analysis concerning the potential to bring additional qualified  
7 personnel into California. The consultant identified 46 total tree companies in the United States  
8 who were not already working for PG&E. Fifteen of those companies declined to participate in  
9 the analysis at all (most were small and regionally based) and 22 only participated in an initial  
10 survey stating that they had no interest in working in California due to (among other reasons):  
11 liability risk, regulatory/business environmental and insurance requirements, or lack of available  
12 qualified personnel to expand. The remaining nine vendors expressed, in aggregate, an ability to  
13 mobilize possibly a few hundred qualified personnel to California and generally expressed an  
14 interest in only emergency/short-term work, not a willingness to commit long-term to developing  
15 a workforce in California (or moving their existing workforce).

16           21.     *Third*, the challenge of securing increased numbers of qualified personnel  
17 was further illustrated by PG&E's experience seeking assistance under the utility Mutual  
18 Assistance Agreement (MAA) following the Camp Fire in November 2018. The first step in the  
19 Mutual Assistance process is to seek support from within California. Limited personnel were  
20 available due to concurrent emergency response needs in the state. PG&E subsequently  
21 expanded its Mutual Assistance request to the Western Regional Mutual Assistance Group,  
22 followed by the Mid-West and Texas Regional Mutual Assistance Groups, and eventually all  
23 seven regional Mutual Assistance groups in the country. At each expansion of PG&E's request  
24 for Mutual Assistance, PG&E was unable to secure the requested number of personnel. PG&E's  
25 efforts to locate sufficient VM contractors after the Camp Fire was escalated to the status of a  
26 National Response Event, a process established for utility CEOs nationwide following  
27 Superstorm Sandy. In the end, the request for VM Mutual Assistance request was made to more  
28

1 than 200 utilities in an effort to locate 700 tree workers and 150 VM pre-inspectors to aid in  
 2 recovery efforts. From that request, PG&E was only able to secure 223 tree workers and 40 pre-  
 3 inspectors from across the country. And these workers only stayed for a limited period of time  
 4 under the Mutual Assistance Agreements.

#### 5 PG&E's Ramp Up of Vegetation Management Resources

6 22. PG&E's vegetation management program generally requires two different  
 7 types of tree workers: pre-inspectors, who inspect the vegetation to identify work that needs to  
 8 be completed, and tree trimmers, who conduct the actual tree work. PG&E made significant  
 9 efforts in 2019 to expand the available pool of both categories of tree workers.

#### 10 *Pre-inspectors*

11 23. In 2019, PG&E was able to increase its total contracted pre-inspector  
 12 workforce from approximately 580 to 1,375, largely by onboarding and training new pre-  
 13 inspectors in cooperation with its contractors.

14 24. PG&E's efforts to expand its contracted pre-inspector workforce was  
 15 aided by the development of two internal training programs to train resources newly hired by  
 16 PG&E's contractors.

17 25. First, in January 2019, PG&E launched "Vegetation Management for  
 18 Inspectors", a day-long instructor-led training in safety, patrol procedures and PG&E standards  
 19 and rating systems, for all contract pre-inspectors to supplement training provided by vegetation  
 20 management companies.

21 26. Second, in July 2019, PG&E supplemented this basic training with a  
 22 three-day training program for all new pre-inspectors performing EVM work. A large  
 23 percentage of the new pre-inspectors were "Level 1" pre-inspectors who, while they have  
 24 relevant vegetation-related experience or education, had little to no experience as vegetation  
 25 management pre-inspectors. These training programs not only helped PG&E address near-term  
 26 EVM resource constraints, but also expands the pool of skilled and experienced pre-inspectors  
 27 available to PG&E and other California utilities in the future.



1           27. PG&E is also in the process of developing an eight course, comprehensive  
2 pre-inspector training program that include web-based training, scenario-based skills  
3 assessments, on-the-job training, and mentoring relationships with experienced pre-inspectors.  
4 Pre-inspectors will be required to pass scenario-based skills assessments that test key concepts  
5 covered in the Training Program, and experienced pre-inspectors will be paired with new pre-  
6 inspectors to provide on-the-job trainings and serve as mentors and resources during the pre-  
7 inspector's first year of training. Following completion of the eight courses and passing the  
8 skills assessment, pre-inspectors will continue to receive guidance and remote supervision from  
9 their mentors, who will perform audits on pre-inspectors' work throughout the first year. Every  
10 two years following initial completion of the training program, pre-inspectors will be required to  
11 complete additional evaluations, which may include additional training, to ensure retention of  
12 important concepts and skills. PG&E expects to complete development of the curriculum of the  
13 training program by June 30, 2020, and will begin a test roll-out at that time.

14           28. Finally, in January 2020, PG&E reached an agreement with its primary  
15 union, the International Brotherhood of Electric Workers ("IBEW"), to conduct a pilot program  
16 to evaluate the use of an internal, PG&E pre-inspector workforce. The purpose of the pilot  
17 program is to evaluate whether bringing a portion of the current, contracted pre-inspector  
18 workforce in-house will provide for improved long-term retention of pre-inspectors and build  
19 efficiencies. The program is not contemplated to replace PG&E's large contracted pre-inspector  
20 workforce, but, if successful, would allow PG&E to build a skilled, internal pre-inspector  
21 workforce to conduct EVM work verification, support regional pre-inspection for all of PG&E's  
22 vegetation management programs, mobilize for emergency and storm response, and be  
23 reassigned, as needed, to cover other vegetation management resource needs across PG&E's  
24 service area. During the course of the pilot, PG&E will assess the work safety, efficiency,  
25 quality, rate of attrition, and cost of the internal pre-inspector workforce compared to contractor  
26 resources to evaluate whether an internal workforce is an economic and beneficial supplement to  
27 PG&E's use of contractors.

*Tree Trimmers*

29. Because of training and certification requirements that are in place as a result of the dangerous nature of the work involved in clearing vegetation near power lines, hiring resources with limited experience is not possible. Despite these challenges, PG&E was able to expand its total contracted tree trimmer workforce from approximately 1,400 to 5,437, by working with contractors to identify additional trimmers, largely by recruiting trimmers from outside of California. In order to encourage tree trimmers to come to California, PG&E may have to pay its contractors a premium, including a mobilization fee to cover relocation and training time, a per diem stipend to cover housing and meal expenses, and in some cases guaranteeing overtime work or paying a time and material rate.

30. Like most major electric utilities in the United States, PG&E outsources its tree trimming and removal work to specialized tree and vegetation management contractors. For decades, PG&E's vegetation management contractors have expended significant resources to identify, train, manage, equip and deploy appropriately qualified personnel who can perform tree work safely and meet the line clearance needs of PG&E and other electric utilities. These companies focus exclusively on vegetation management. By contrast, PG&E devotes significant resources every year to the ongoing operation and maintenance of electric and gas infrastructure for 16 million Californians. It is not a vegetation management company and is not currently in a position to perform tree work as safely and efficiently as companies that have been performing such work as their core business activity for decades, let alone more safely or more efficiently.

31. PG&E's use of a contractor-based workforce provides significant advantages with regard to flexibility and other efficiencies. The use of a contractor workforce that collectively covers all parts of Northern California allows PG&E to quickly and efficiently deploy tree trimmers across its vast service territory, and gives PG&E the flexibility to terminate relationships with contractors whose work does not meet PG&E's high standards. Moreover, the competition among contractors that vie for PG&E's business spurs innovation and improvements in efficiency and work quality, to the ultimate benefit of ratepayers. A contractor-based

workforce gives PG&E flexibility in the selection and deployment of crews, control over quality and performance standards, and ready access to specialized services, technical expertise and equipment.

32. The costs of establishing a full-scale tree trimming service within PG&E would be prohibitive and far outweigh whatever efficiencies might be realized over time. Among other things, PG&E would have to fund training, salaries, benefits, travel expenses and statutorily-required overtime for a workforce of at least 5,000 tree trimmers, plus mechanics to maintain equipment and management, security, administrative and support staff; procure a large fleet of trucks and specialized equipment and tools; secure office space for administrative staff and information technology resources to support their operations; and establish, staff and maintain multiple wood management yards for the storage and disposal of vegetative material. All of the equipment required for day-to-day operations would immediately begin to depreciate and require ongoing maintenance and replacement, and the anticipated rate of turnover would add to yearly costs. PG&E conservatively estimates that these costs would run into the hundreds of millions of dollars and could exceed \$1 billion. It is likely that PG&E's ratepayers would bear a significant portion of this expense.

33. If PG&E were required to hire tree trimmers as part of its internal workforce, most new hires would necessarily come from the existing pool of contract workers who already perform work on PG&E lines. The end result would be a change in the composition of, but not an increase in, the overall resource pool. The movement of these workers from PG&E's contract workforce to its internal workforce would not alleviate resource constraints in the near term.

Additional PG&E Programs to Expand the Underlying Resource Pool Under  
Development in Conjunction with the Authorized State Utility Regulator

34. PG&E is engaged in a variety of programs designed to increase the underlying labor pool and improve the quality and efficiency of its vegetation management work.

1 These programs have been developed in a careful, considered manner in cooperation with other  
 2 stakeholders and experts in the industry, as well as with CPUC guidance.

3 35. In response to the vegetation management resource constraints PG&E  
 4 identified in its Wildfire Safety Plan, the CPUC directed PG&E to investigate partnerships with  
 5 state and local governments to identify additional skilled labor available in the near-term and  
 6 explore other possibilities such as local training programs to increase the skilled labor pool in the  
 7 longer-term.<sup>6</sup> PG&E assembled a task force to conduct outreach to local governments to gauge  
 8 interest in sharing vegetation management personnel and other resources. In 2019 and  
 9 January 2020, PG&E conducted outreach to local agencies in 23 priority jurisdictions. To date,  
 10 none have identified vegetation management resources that would provide a meaningful increase  
 11 to PG&E's current contracted workforce, and a number have indicated that they themselves are  
 12 understaffed, but several have expressed interest in continued conversations about potential joint  
 13 efforts. In addition to continuing conversations with the local agencies it has already contacted,  
 14 in 2020 PG&E is expanding its outreach to additional local agencies.

15 36. The CPUC's Safety and Enforcement Division ("SED") in 2019 also  
 16 evaluated the quality and availability of vegetation management workers as part of its Order  
 17 Initiating Investigation concerning the North Bay Fires and Camp Fire ("Wildfires OII"). As  
 18 part of its resolution of the Wildfires OII with the SED and other stakeholders, PG&E is  
 19 collaborating with community colleges, vegetation management contractors, the line clearance  
 20 trimmer labor union, and other California utilities to establish a Tree Trimmer Training and  
 21 Certificate Program and a Pre-Inspector Training and Certificate Program to train tree crew  
 22 workers and pre-inspectors in local communities where the need for such workers is greatest.  
 23 Those who successfully complete the Tree Trimmer Training and Certificate Program will meet  
 24 the minimum requirements to be hired as entry-level tree workers and receive support in  
 25

26  
 27 <sup>6</sup> Decision on Pacific Gas and Electric Company's 2019 Wildfire Mitigation Plan Pursuant  
 to Senate Bill 901, Rulemaking 18-10-007, dated June 4, 2019, at 26, 64.



obtaining certification as International Society of Arboriculture (“ISA”) Certified Tree Worker Climber Specialists. Those who successfully complete the Pre-Inspector Training and Certificate program will also receive support in obtaining ISA certification.

37. PG&E, in partnership with Butte College, is currently developing the infrastructure and content for both programs. These efforts include assembling the curriculum for each program, establishing partnerships with community colleges to host the programs, developing instructor training materials, creating evaluation methods for the programs, and coordinating cooperative relationships with other stakeholders such as vegetation management contractors, labor unions, and other utilities. PG&E expects to launch a pilot of the tree crew program in the first quarter of 2020 at Butte College, and a pilot of the pre-inspector program later in 2020. Subsequently, PG&E expects to launch the programs at additional community colleges across the state. PG&E expects at least 18 community colleges across the state, including ten in its service territory, to participate in hosting these training programs. The specific community colleges invited to host these programs, as well as the number of multi-week training programs per year at each participating college, are intended to produce concentrated numbers of program graduates in geographic areas with particularly high needs for tree workers and pre-inspectors. The majority of participants will complete their respective programs at community colleges within PG&E’s service territory.

38. Both programs are being launched with shareholder funding so that the cost will not be borne by ratepayers. PG&E’s shareholder funding of \$6.25 million for the tree crew training program and \$3.5 million for the pre-inspector training program over three years following the effective date of the Settlement Agreement with the CPUC will cover startup costs for both programs, as well as partial scholarships to cover program tuition for a subset of students within PG&E’s service territory. PG&E’s efforts also include coordinating arrangements by which stakeholders—for example, contractors seeking to hire new employees already trained for their respective roles—may offset tuition costs for various subsets of students. After the programs are launched, student tuition will fund per-session expenses such as

1 classroom and field instructor salaries, course materials, classroom space, and necessary  
2 equipment, as well as overall program maintenance (for example, updating the curriculum as  
3 needed). In other words, PG&E expects the programs to be self-sustaining based on these  
4 student fees.

5           39. PG&E projects that after the programs are fully launched and  
6 implemented, they will support an annual capacity within PG&E's service territory of up to  
7 approximately 600 individuals for the tree crew training program and up to approximately 215  
8 individuals for the pre-inspector training program. This target capacity is intended to help  
9 maintain a steady supply of vegetation management workers to account for typical rates of  
10 attrition and retirements. At the programs' outset, however, PG&E and Butte College intend for  
11 the tree crew program to support a total capacity of up to approximately 2,800 individuals across  
12 PG&E's service territory between program launch and mid-2021 in an effort to address the  
13 current shortage of qualified in-state tree workers.

1 I declare under the penalty of perjury that the foregoing is true and correct and  
2 that I executed this declaration on February 12, 2020, in San Ramon, California.

3 [REDACTED]  
4 [REDACTED]

5 [REDACTED]  
6 [REDACTED]